

IN THE  
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): James R. Heath, et al.

Confirmation No.:

Application No.:

Examiner:

Filing Date: Filed Herewith

Group Art Unit:

Title: Chemically Synthesized and Assembled Electronic Devices

Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

This Information Disclosure Statement is submitted:

- ☒ under 37 CFR 1.97(b), or  
(Within three months of filing national application; or date of entry of national application; or before mailing date of first office action on the merits; whichever occurs last)
- ☐ under 37 CFR 1.97(c) together with either a:  
☐ Statement under 37 CFR 1.97(e), or  
☐ a \$180.00 fee under 37 CFR 1.17(p), or  
(After the 37 CFR 1.97 (b) time period, but before final action or notice of allowance, whichever occurs first)
- ☐ under 37 CFR 1.97 (d) together with a:  
☐ Statement under 37 CFR 1.97(e)(1) or (2), and  
☐ a \$180.00 fee set forth in 37 CFR 1.17(p).  
(Filed after final action, a notice of allowance, on or before payment of the issue fee)

Please charge to Deposit Account **08-2025** the sum of \$0.00. At any time during the pendency of this application, please charge any fees required or credit any overpayment to Deposit Account **08-2025** pursuant to 37 CFR 1.25.

☒ Applicant(s) submit herewith Form PTO 1449 - Information Disclosure Statement together with any required copies of patents, publications or other information of which applicant(s) are aware, which applicant(s) believe(s) may be material to the examination of this application and for which there may be a duty to disclose in accordance with 37 CFR 1.56.

☐ A concise explanation of the relevance of foreign language patents, foreign language publications and other foreign language information listed on PTO Form 1449, as presently understood by the individual(s) designated in 37 CFR 1.56 (c) most knowledgeable about the content is given on the attached sheet, or where a foreign language patent is cited in a search report or other action by a foreign patent office in a counterpart foreign application, an English language version of the search report or action which indicates the degree of relevance found by the foreign office is listed on form PTO 1449 and is enclosed herewith.

It is requested that the information disclosed herein be made of record in this application.

"Express Mail" label no. **EL 968345551**

Date of Deposit **Oct. 30, 2003**

I hereby certify that this is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to: Commissioner for Patents, Alexandria, VA 22313-1450.

By

Myra Christeck

Typed Name: **Myra Christ ck**

Respectfully submitted,

**James R. Heath, et al.**

By

David W. Collins

**David W. Collins**

Attorney/Agent for Applicant(s)

Reg. No. **26,857**

Date: **Oct. 31, 2003**

**PATENT APPLICATION**

Sheet 1 of 5

<b>FORM PTO-1449</b>  <b>LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT</b>  (Use several sheets if necessary)	ATTY. DOCKET NO. <b>10981971-5</b>	APPLICATION NO.	CONFIRMATION NO.
APPLICANT <b>James R. Heath, et al.</b>			
FILING DATE <b>Filed Herewith</b>			
GROUP			

**REFERENCE DESIGNATION                      U.S. PATENT DOCUMENTS**

EXAMINER INITIAL		DOCUMENT NUMBER	PUBLICATION DATE	NAME	Pages, Columns, Lines Where Relevant Passages or Figures Appear
	1A	6,314,019	11/6/2001	Kuekes et al.	Background Reference
	1B	6,128,214	10/3/2000	Kuekes et al.	Background Reference
	1C	6,256,767	7/3/2001	Kuekes et al.	Background Reference
	1D	3,975,623	8/17/76	Weinberger	Background Reference
	1E	4,208,728	6/17/80	Blahut et al.	Background Reference
	1F	5,475,341	12/12/95	Reed	Background Reference
	1G	5,729,752	3/17/98	Snider et al.	Background Reference
	1H	5,790, 771	8/4/98	Culbertson et al.	Background Reference
	1I	5,640,343	6/17/97	Gallagher et al.	Background Reference
	1J	5,519,629	5/21/96	Snider	Background Reference
	1K				

**FOREIGN PATENT DOCUMENTS**

		DOCUMENT NUMBER	PUBLICATION DATE	NAME OF PATENTEE OR APPLICANT	Pages/Columns/Lines Where Relevant Passages/Figures Appear	Check if Translation attached
	1L					
	1M					
	1N					
	1O					
	1P					

**OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)**

	1Q	Heath, J.R., et al., "A Defect-Tolerant Computer Architecture: Opportunities for Nanotechnology", Science, Vol. 280, 12 June 1998, pp. 1716-1721.
	1R	Guo, L., et al., "Nanoscale Silicon Field Effect Transistors Fabricated Using Imprint Lithography", Applied Physics Letters, Vol. 71, 29 September 1997, pp. 1881-1883.
	1S	Morales, A.M., et al., "A Laser Ablation Method for the Synthesis of Crystalline Semiconductor Nanowires", Science, Vol. 279, 9 January 1998, pp. 208-268.

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	2O					
	2P					

## OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

2Q	Heath, J.R., et al., " A Liquid Solution Synthesis of Single Crystal Germanium Qunatum Wires", Chemical Physics Letters, Vol. 208, No 3, 11 June 1993, pp. 263-268.
2R	Menon, V.P., et al., "Fabrication and Evalution of Nanelectrode Ensembles", Analytical Chemistry, Vol 67, July 1, 1995, pp. 1920-1928.
2S	Guo, L., et al., "A Silicon Single-Electron Transistor Memory Operating at Room Temperature", Science, Vol. 275, 31 January 1997, pp. 649-651.

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## OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

	3Q	Trans, S. J., et al., "Room-Temperature Transistor Based on a Single Carbon Nanotube", Nature, Vol. 393, 7 May 1998, pp. 49-52.
	3R	Likharev, K.K., "Correlated Discrete Transfer of Single Electrons in Ultrasmall Tunnel Junctions", IBM Journal of Research and Development, Vol. 32, No. 1, January 1998, pp. 144-158.
	3S	Jones, R. E., et al., "Ferroelectric Non-Volatile Memories for Low-Voltage, Low-Power Applications", Thin Solid Films, Vol. 170, 1 December 1995, pp. 584-588.

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	4P					

## OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

4Q	Amabilino, D.B., et al., "Aggregation of Self-Assembling Branched [n]-Rotaxanes", New Journal of Chemistry, Vol. 22, no. 9, 11 September 1998, pp. 959-972.
4R	Vossmeyer, T., et al., "Combinatorial Approaches Toward Patterning Nanocrystals", Journal of Applied Physics, Vol. 84, No. 7, 1 October 1998, pp. 3664-3670.
4S	Leff, D.V., et al., "Thermodynamic Control of Gold Nanocrystal Size: Experiment and Theory". The Journal of Physical Chemistry, Vol. 99, 4 May 1995, pp. 7036-7041.

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	5Q	Holloway, J.D., et al., "Electron-Transfer Reactions of Metallocenes: Influence of Metal Oxidation State on Structure and Reactivity", Journal of the American Chemical Society, Vol. 101, 11 April 1979, pp. 2038-2044
	5R	Mead, C., et al., "Introduction to VLSI Systems", Addison-Wesley, 1980, Chap. 3, Sect. 10, pp. 79-82.
	5S	

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